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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,572	06/12/2000	Richard Dellacona	QUAD:55767	4159

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07/05/2005

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EXAMINER

THANGAVELU, KANDASAMY

ART UNIT PAPER NUMBER

2123

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

09/592,572

Applicant(s)

DELLACONA, RICHARD

Examiner

Kandasamy Thangavelu

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2123

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 14 June 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-3,5-13,16-21,23-31 and 34-36.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: the Applicants' arguments are not persuasive. See attachment- A.
12. ☒ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.

ATTACHMENT – A: ADVISORY ACTION

1. This communication is in response to the Applicant's response dated June 14, 2005. Applicant's arguments filed on June 14, 2005 have been fully considered. Applicant's arguments, filed on June 14, 2005 under 35 U.S.C. 103 (a) are not persuasive.

Arguments

2.1 As per the applicant's argument that "The Examiner cited Espy as teaching optical input/output connectors of first and second mass storage modules connected by a fiber optic transmission medium, referring to Espy at page 2, line 29 to page 3, line 6, and page 6 lines 7-16, mentioning a Fibre Channel, which however in Espy is not a fiber optic transmission medium; at page 6, line 28 to page 7, line 3, Espy teaches that a twinax cable 18 is a standard cable for Fibre Channel, and includes four wire conductors; Espy clearly does not teach, disclose or suggest optical input/output connectors of first and second mass storage modules connected by a fiber optic transmission medium;

the Examiner asserted that Swanson et al. teaches a module bypass circuit board including an optical input/output connector for outputting electrical signals from the module as light signals and for inputting light signals into the module as electrical signals; Swanson et al. only teaches a module that is an optical transceiver, not a module bypass circuit board; the Examiner asserted that column 1, lines 19-42 of Swanson et al. teaches optical transmission provides large capacity for digital transmission in computer/communication networks; however,

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Swanson et al. only teaches optical transmission for "large capacity digital transmission in communication networks, such as public telecommunications networks"; Swanson et al. does not teach, disclose or suggest optical input/output connectors of first and second mass storage modules connected by a fiber optic transmission medium, such as for a high speed mass storage system;

the Examiner further asserted that Hillis teaches optical input/output connectors of first and second mass storage modules connected by a fiber optic transmission medium, and that it would be obvious to modify the system of Leshem with the system of Hillis; the Examiner referred to Figs. 5 and 6, and column 10, line 59 to column 11, line 5; column 11, lines 29-33; and column 11, lines 34-51; Hillis teaches cabinets 500 each containing circuit boards 430 that are connectable to mass storage modules 470; the cabinets 500 are interconnected via communications modules 505 via fiber optic communications lines; however, Hillis contains no disclosure, teaching or suggestion that the communications modules 505 are module bypass circuit boards; the Examiner acknowledged that Leshem does not teach mass storage modules including a storage device bypass circuit board; therefore, modifying the system of Leshem with the system of Hillis would not result in the invention as claimed;

the Examiner cited Harvey as teaching a disk drive bypass circuit board associated with each disk drive and including a disk drive connector at one edge thereof and a bypass board connector at another edge thereof, with each disk drive being plugged into the disk drive connector on the disk drive bypass circuit board; however, Harvey does not teach, disclose or suggest optical input/output connectors of module bypass circuit boards of first and second mass

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storage modules connected by a fiber optic transmission medium”, the Examiner respectfully disagrees.

Leshem teaches a **high speed mass storage system connected by fiber channel** because fiber channel will provide high data rates (CL1, L4-8; CL1, L31-37; Abstract, L11-14). It is inherent that the fiber channels could be **fiber optic communication channels** because as per **Hillis** fiber optic communication lines have high bandwidth and data rates of 100 megabits per second (CL11, L43-48). Additional references using fibre optic communication with fiber channel protocol is provided in Paragraph 2.2 below.

Espy teaches a high speed mass storage system which is readily expandable to increase its storage capacity while the system is in operation (Page 1, L19-24); first and second mass storage modules (Fig. 1, Items 10 and 110; Page 1, L19-24) and each mass storage module including a module bypass circuit board (Page 2, L5-23; Fig. 1, Item 40; Page 6, L7-16), as that will enable to add an additional disk array chassis to the existing system when additional memory space is required, without shutting down the existing system (Page 1, L19-24). **Espy** teaches that the connectors of the first and second mass storage modules are connected by a fiber channels (Page 2, L29 to Page 3, L6; Page 6, L7-16), because as per **Leshem** the fiber channel will provide high data rates (CL1, L31-35). It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the high speed mass storage system of **Leshem** with the mass storage modules and module bypass boards of **Espy** as that would enable to add an additional disk array chassis to the existing system when additional memory space was

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required, without shutting down the existing system. Though **Espy** uses 4 wire cable for the fiber channel, the fiber channel could be fiber optic channels as described in the preceding paragraph.

Swanson et al. teaches optical transceivers for outputting electrical signals from the module as light signals and for inputting light signals into the module as electrical signals (Fig. 2; CL1, L19-42), as the optical transmission provides large capacity for digital transmission in computer/communication networks. It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify module bypass boards of **Espy** with the optical transceivers of **Swanson et al.** because that would provide optical input/output connectors of the first and second mass storage modules, providing for fiber optic transmission such that signals were communicated between the first and second mass storage modules in the form of light; and the optical transmission would provide large capacity for digital transmission between the storage modules (CL1, L26-29).

In addition, **Hillis** teaches cabinets containing circuit boards connected via communication modules via fiber optic communication lines, such that signals are communicated between the first and second communication modules in the form of light (Fig. 5; Fig. 6; CL10, L59 to CL11, L5; CL11, L29-33; CL11, L34-51), because fiber optic communication lines have high band width and data rates of 100 megabits per second (CL11, L43-48). The communication modules have optical transceivers to convert the electrical signals to optical signals at the sending side and to convert optical signals to electrical signals at the receiving side. It would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to modify the combination system of **Leshem** and **Espy** having a module

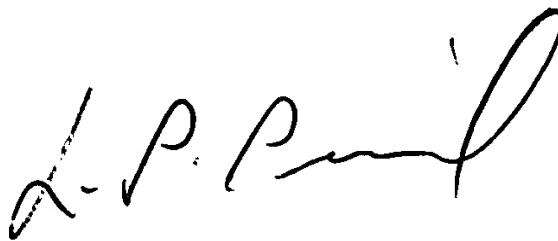
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bypass board with the system of **Hillis** that included the optical input/output connectors of the first and second communication modules connected by a fiber optic transmission medium. The artisan would have been motivated because fiber optic communication lines would have high bandwidth and data rates of 100 megabits per second.

2.2 Applicant's attention is directed to **Schlueter et al.** (U. S. Patent 6, 240,471) which uses fiber optic communication with fiber channel protocol (Abstract; Fig. 1; Fig. 3); and to **Bennet et al.** (U. S. Patent 5,828,475) which also uses fiber optic communication with fiber channel protocol (Abstract, L8-11; Fig. 1A; CL1, L40-43; CL2, L44-47; CL5, L17-20; CL6, L57-62).

3. In view of the above explanation, the request for reconsideration has been considered but is not persuasive and does not place the application in condition for allowance.

K. Thangavelu
Art Unit 2123
June 29, 2005



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